

## Content Analysis of Australian Special Education Research 2005-2015

**Michelle M. Ralston**

University of Newcastle, Australia

[michelle.ralston@newcastle.edu.au](mailto:michelle.ralston@newcastle.edu.au)

**Kerry A. Dally**

University of Newcastle, Australia

**Ian Dempsey**

University of Newcastle, Australia

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**Abstract**

Australian special education literature from 2005 to 2015 was analysed to identify trends in topics and issues. A content analysis revealed a strong focus on inclusive teaching practice and education, and a growing interest in addressing behavioural and emotional disabilities, and teaching social skills in regular classrooms. The findings suggest that inclusive education principles and practices have become a major focus in 'special' education research. While disability specific issues remained topical, there was an increasing interest in the complex socio-cultural contexts of schools and classrooms, and supporting students with additional needs within inclusive environments. Recommendations for further research are provided.

*Keywords:* Special education, inclusive education, Australian research

## **Introduction**

At the turn of the century, Forlin and Forlin (2000) published a broad historical overview of special education research in Australia from 1950 to 2000. Their review identified changing issues and research practice in methodology, collaboration between researchers and recognition of the increasingly complex sociological context when investigating the education of students with disability in inclusive learning environments. Five years after Forlin and Forlin's review, the Australian Disability Standards for Education 2005 (Commonwealth of Australia, 2005) were legislated. These standards articulated obligations for Australian education providers to ensure equitable access to education for students with disabilities. Since the Disability Standards were introduced, there have been a number of related national initiatives that have reshaped Australian educational systems and policies around equity and educational inclusion for students with disability.

Given the significant legislative, administrative and philosophical changes in special education policy and practice since the introduction of the Disability Standards for Education, this article reports the results of a content analysis of the research literature in this field during the past decade to identify how these initiatives might have shaped research trends, topics and methodologies. The article commences with a discussion of Forlin and Forlin's (2000) review, followed by a description of the recent changes in Australian educational policies. The themes emerging from the current content analysis are discussed along with implications for future research and policy.

## **The history of Special Education research in Australia**

Forlin and Forlin (2000) described the evolution of a dual system of special and regular education during the 1950s-1970s in Australia. The first special schools developed from a recognition that students with disability needed more than care, and benefited from

education. At this time, Australian research focussed on diagnostic tools to classify and label students so that they were able to access "the most appropriate schooling" (Forlin & Forlin, 2000, p.249).

During the 1970s-90s the philosophy of integration rather than segregation became prevalent, and research began to focus on the ethical issues of segregation and integration. Government funded reviews were undertaken which commonly identified deficiencies in the provision of resources and support for special education teachers and students with disabilities (Beazley, 1984). Inadequate training for teachers in special education, lack of mandated legislation and policies regarding inclusive services and practices, as well as poor management of change were also identified (Shean, 1993).

As the social justice movement became prominent in Australia during the 1990s, a sociological perspective to research emerged (Greaves, 1999). This necessitated a rise in qualitative studies as the research needed to take into account the complex context of school organisation, curriculum, classrooms and teacher skills, as well as the student (Rohl, 1999; Santos, Fowler, Corso & Bruns, 2000). Forlin and Forlin (2000) identified the emergence of different types of research design and methods such as historical (O'Donoghue & Chalmers, 1998) and sociological (Greaves, 1999) approaches, as well as participatory action research (Beamish & Bryer, 1999). The number of literature reviews also increased as researchers discussed common threads in research design and student outcomes (Center & Freeman, 1996).

During the late 1990s, a tension arose between quantitative and qualitative research methodologies (Grenfell & James, 1998). Quantitative researchers claimed statistical measurement was essential for validation and generalisation (e.g. Rowe, 1999), whereas qualitative methodologies were interpreted as providing more meaningful results for the complex, less controlled environment of the mainstream school (Vialle, 1997). Forlin and

Forlin (2000) argued that research on students with disabilities needed to be more holistic as well as empirically based so that the rights and needs of all students could be effectively addressed in the 21st century. They called for a rise in ethnographic research which utilised qualitative and quantitative data in mixed method research studies to reveal outcomes which may be applied across "complex sociocultural school systems" (Forlin & Forlin, 2000, p. 254).

Forlin and Forlin (2000) also identified the emergence of collaborative partnerships in research during the 1990s, particularly with respect to inclusivity. They suggested that collaborative research teams may potentially provide a greater depth of insight when investigating contextual variables such as socio-political, government and systemic influences, culture of schools and systems, attitudes of staff, and school size. While international collaboration was welcomed, Forlin and Forlin (2000) highlighted the need for an increased focus on research in the uniquely Australian classroom given the influence of variables such as curriculum, legislation, policy, professional practice and culture.

Perhaps Forlin and Forlin's (2000) most significant finding was that Australian research in special education 1950-2000 appeared to be in response to socio-political changes in government policy, rather than the research preceding and leading educational change. They also noted the impact that government funded research schemes played in the content and quantity of research in Australian special education. Forlin and Forlin (2000) suggested that researchers may have greater access to research funding if they shifted their focus to a more "inclusive research agenda" (p. 254). This broader focus could incorporate building the capacity of regular teachers to implement effective instructional and classroom management strategies which would improve the outcomes for students with disabilities as well as their peers. Aligning the research focus with the pursuit of quality teaching and learning in inclusive schools could lead to increased funding opportunities (State of NSW, Department

of Education and Training, 1997). The issue of censorship by educational authorities was also raised, whereby permission to undertake research in schools was limited by the authority's reluctance to allow publication of any areas of concern with existing practice. This limited the opportunity for research to lead educational change and continuous improvement.

In summary, Forlin and Forlin's (2000) review revealed a broad, rather than a deep range of research topics including: learning difficulties; severe disabilities; professional needs of teachers; student learning outcomes; numeracy; intellectual disabilities; reading difficulties; community involvement of older Australians with intellectual disabilities; early intervention; and behavioural and emotional problems. The predominantly student-centred quantitative research focussed on the clinical development of diagnostic tools to determine eligibility for placement in segregated, specialist schools and services as well as measurement of effective intervention programs relative to baseline and post intervention assessment.

### **Legislative educational changes since 2005**

The new millennium brought significant changes to the socio-political context of Australian special education. These changes were partly in response to international initiatives such as the *Convention on the Rights of Persons with Disabilities* (United Nations - Disability; Department of Economic and Social Affairs, 2006) and *Policy Guidelines on Inclusion in Education* (UNESCO, 2009). These policy guidelines articulated that to maximise the participation of all learners in education, legislation and policy is required to remove barriers that either discriminate, marginalise or exclude students with disability (Ainscow, Booth & Dyson, 2006; UNESCO, 2009). Governments throughout the world responded with national legislation and policies that provided a regulatory framework for the inclusion of students with disabilities into regular schools. In the United States of America, legislation such as the *Individuals with Disabilities Education Improvement Act (IDEA)*

(2009) and anti-discrimination legislation aimed to support inclusion and resolve barriers to learning, increase participation, and reduce exclusion from schools and communities.

In Australia, the *Disability Standards for Education* (DSE) (Commonwealth of Australia, 2005), legislated in 2005, were formulated under the *Disability Discrimination Act* (DDA) (Commonwealth of Australia, 1992) to “clarify and make more explicit” (Commonwealth of Australia, 2006, p.41) the rights of people with disability in relation to education and training and the legal responsibilities of education providers to prevent discrimination on the basis of disability. However, inclusive education is not specifically legislated. The DSE (2005) articulates key principles and expected actions to ensure that students with disability can participate in education and training *on the same basis* (DSE, 2005, Part 2.2) as their peers without disability. The DDA (1992) places high expectations that these actions will be demonstrated, with the statement that non-compliance “by action or omission” will be regarded as a criminal act (DDA Section 5(1); DDA Section 42; DDA Section 12A). The DSE (2005) may be regarded as a mechanism to promote inclusive education, as the legislation is aimed at removing barriers that discriminate and exclude students with disability while enabling their participation in an educationally supportive environment (Commonwealth of Australia, 2006). While many aspects of inclusion have been adopted, no state or territory in Australia has a clear inclusive education policy or framework (Foreman, 2015; Forlin, Chambers, Loreman, Deppeler & Sharma, 2013; State of Victoria, 2016).

Further national changes, which had a direct impact on the education of students with disability, included the first national curriculum (Australian Curriculum, Assessment and Reporting Authority (ACARA), n.d.), Australian Professional Standards for Teachers (Australian Institute for Teaching and School Leadership (AITSL), 2015), and the Nationally

Consistent Collection of Data (Australian Government Department of Education and Training, n.d.).

The impetus for the establishment of the Australian Curriculum, Assessment and Reporting Authority (ACARA) in 2009 to oversee the implementation of the first national curriculum (ACARA, 2016, n.d.) came from the 2008 Melbourne Declaration on Educational Goals for Young Australians (Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA). The MCEETYA declaration called for national goals to promote “equity and excellence” so that all young Australians could become “successful learners, confident and creative individuals, and active and informed citizens” (MCEETYA, 2008, p7).

The Australian Professional Standards for Teachers were introduced in 2011, under the auspices of the Australian Institute for Teaching and School Leadership (AITSL) (AITSL, 2015). The professional standards formed the basis of teacher accreditation and AITSL was given responsibility for teacher registration and endorsement of teacher education and professional learning programs (AITSL, 2015). In relation to special education, AITSL mandated at least one pre-service course on special education (AITSL, 2015) and teachers are required to demonstrate use of strategies to support full participation of student with disability (AITSL, 2015, Standard 1.6) that meet their specific learning needs (AITSL, 2015, Standard 1.5) in inclusive learning environments (AITSL, 2015, Standard 4.1).

Another national initiative, from the Council of Australian Governments (COAG) in 2008, was the development of a model for the Nationally Consistent Collection of Data (NCCD) on school students with disability, to "enable schools, education authorities and governments to gain a more complete understanding of students with disability in schools in Australia and how best to support them" (Australian Government Department of Education and Training, n.d., para. 3). A further goal of the NCCD was to “embed into everyday school

practice” the obligations of the *Disability Discrimination Act 1992* and the *Disability Standards for Education 2005* (Australian Government Department of Education and Training, n.d., para. 5). After trials in 2011 and 2012, the NCCD was phased in over three years, and became compulsory for all schools in Australia from 2015 onwards.

The process of Nationally Consistent Collection of Data (Commonwealth of Australia, 2018) requires that schools annually report how many students have been identified with a disability and need adjustments. Information must be provided about each student’s: broad category of disability (physical, cognitive, sensory and social-emotional); level of adjustment provided: and, level of education (primary or secondary). The disability does not need to be formally diagnosed by a medical or clinical professional, however, evidence to support the identification of a disability and provision of adjustment must include records of consultation with the parent/carer and student (when age appropriate) about the type and level of adjustment required. The four levels of adjustment include: Support provided with quality differentiated teaching practice; Supplementary; Substantial; and, Extensive. Support provided through differentiated teaching practice includes minor adjustments that develop and maintain a culture of inclusion, such as ongoing monitoring of a student’s medical or mental health condition and the provision of professional learning to equip staff with the knowledge and skills needed to support the student’s wellbeing.

Supplementary adjustments address a student’s needs at specific times when the nature of the disability affects the student’s participation in school life. For example, modifying instruction with task analysis, intermittent specialist support or specialised technology. Substantial adjustments are described as frequent individualised instruction and “direct support or close supervision in highly structured situations” (Commonwealth of Australia, 2018, p.32), such as curriculum content at a different year level to same-aged peers and modified study materials. Extensive adjustments are “required at all times”

(Commonwealth of Australia, 2018, p.33), and are highly individualised and intensive. For example, augmentative communication, constant and intensive supervision for medical conditions, personal care and hygiene. The levels of adjustment are described in terms of frequency and intensity, however, the type of adjustment is not recorded in the NCCD. Students with disability who are not currently receiving adjustments within the school environment are not recorded in the NCCD.

In part, the NCCD was introduced in response to the substantial increase in the proportion of students with disability attending mainstream classes (Dempsey, 2007). The Australian Bureau of Statistics reported in 2012 that the majority of students with disability (86%) were enrolled in mainstream schools (Australian Bureau of Statistics, 2012). The NCCD 2017 results reveal that 18.8% of the total national student population received adjustments to help them participate in education because of their disability (Commonwealth of Australia, 2017, p. 3). This article reports the findings from an analysis of the content of Australian special education research 2005-2015 to identify trends in research topics and methodology in the context of the socio-political changes described above, during this period.

## **Method**

A search of Australian based literature was performed from July to October 2015 to determine the themes and methodologies pursued in Australian special education research from 2005 to 2015. The year 2005 was selected as the starting point because this was the year the *Disability Standards for Education* (2005) were introduced and the significant legislative, administrative and philosophical changes in education discussed above, occurred shortly thereafter. An inductive content analysis was undertaken. Journal articles about special education in Australia were entered into an excel database using open coding for content.

Categories were generated as groups of similar topics emerged. The research material was further condensed into themes using content-characteristic words (Elo & Kyngas, 2008).

### **Search procedure.**

The literature search of titles, abstracts and key words used the terms (with Boolean protocols) 'special education' AND 'Australia'. These terms were selected to enable comparison with the findings of Forlin and Forlin (2000). The search process commenced with a chronological search of articles published in seven Australian-based journals from 2005 to 2015. These journals were selected as they are prominent Australian journals for education in general or special education specifically, and thus more likely to publish research which met the content analysis criteria. These journals included *Special Education Perspectives*, *Australasian Journal of Special Education*, *International Journal of Disability, Development and Education* (formerly known as *The Exceptional Child* 1976-1988 and *The Slow Learning Child* 1954-1975), *Australian Journal of Learning Difficulties* (formerly *Journal of Learning Disabilities* 1996-2007), *Australian Journal of Education*, *Australian Journal of Teacher Education* and the *International Journal of Whole Schooling*. In addition, a search of title, abstracts and keywords via EBSCO ( $n=290$ ) was undertaken to find potential references in journals beyond the seven journals already searched. The results were cross-referenced with the initial search results so that no duplicates were entered into the data base.

### **Search criteria.**

Articles included in the content analysis met the following criteria:

- a) peer reviewed;
- b) published between 2005-2015;

- c) involved Australian-based participants; OR, implications were directly relevant to Australian special education policy, practice, legislation or educational environments (University, Technical and Further Education (TAFE), colleges and schools, private and public); OR, Authorship was linked to researchers who were directly associated with an Australian research institution at the time of publication, for example, Australian Research Council (ARC) or an Australian university;
- d) the article was a literature review OR empirical research OR a conceptual paper concerning special education in Australia. In the case of a literature review, two additional selection criteria were set- the literature being reviewed had to include Australian research and the discussion was directly relevant to the Australian context. Excluded from the content analysis were books, book reviews and review essays.

Articles about sensory disabilities (hearing and vision) were also excluded because research in this field is typically disability specific and may not reflect the same general educational trends relevant to students without sensory disability. The inclusion and exclusion criteria are presented in Figure 1.

A total of 457 journal articles met the criteria and were entered into the data base. Data were entered into a spreadsheet under the following headings: Year of publication; research methodology; name of journal; author; title; citation; topic; subject major/ minor; and, abstract. Research methodology was identified and recorded as quantitative, qualitative, mixed methods, single subject or literature review. Mixed method research data included case study methodology, and literature review included conceptual research, discussion papers, and proposed models, frameworks or theories.

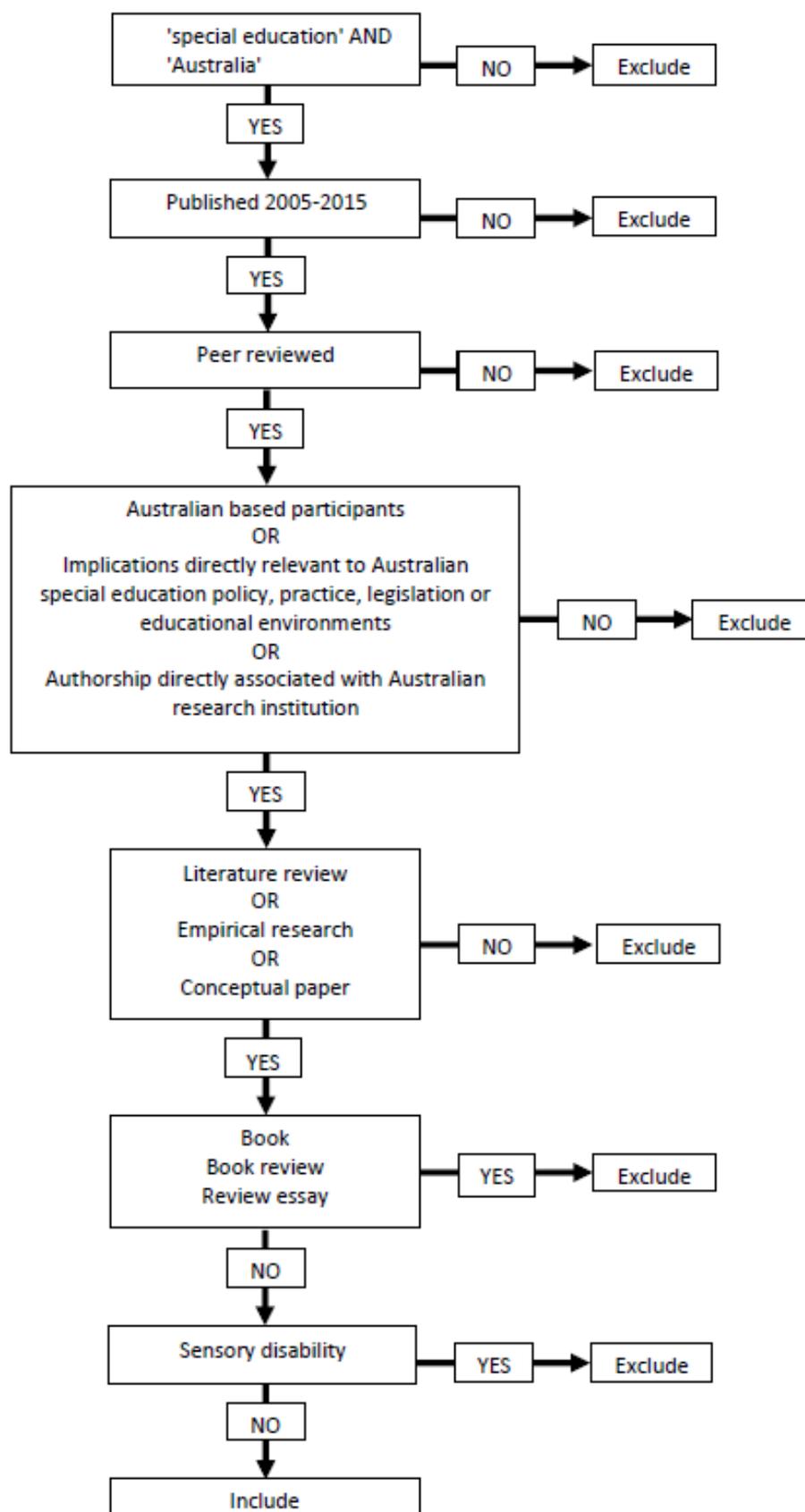


Figure 1. Inclusion and exclusion flow chart

## Results

### Topic allocation and theme categorisation.

Topics were allocated using an open coding process (Elo & Kyngas, 2008) based on the article title, abstract and subject (major) or key words. In the first categorisation, 31 content-characteristic topic headings (Elo & Kyngas, 2008) were allocated, based on the 12 topics identified by Forlin and Forlin (2000) and the article keywords. The topics were then grouped in an evolutionary manner (Bourdieu, 1992) to determine similar content themes and reduce the number of categories (Dey, 1993). Six major themes emerged: Inclusive teaching practice; Inclusive education; Behavioural and emotional difficulties and social skills; Specific disabilities; Collaborative planning; and, Legislation and policies. The themes, topics and number of articles in each topic and theme are presented in Table 1 and the main foci are then discussed under the six broad themes.

Table 1

*Themes, topics and number of articles in each theme*

<b>Themes</b>	<b>Topics and number of articles in each topic</b>	<b>No. of articles</b>
Inclusive teaching practice	Literacy (88); learning disability/difficulty (38); research-based pedagogy (16); numeracy (10); assistive technology (3)	155
Inclusive education	Teacher training pre and in-service (44); inclusion and inclusive classrooms (43); disadvantaged communities (17); assessment for diagnosis and learning (4)	108
Behavioural & emotional disorders & social skills	Behavioural and emotional disorders (51); Health/well-being (6); Social interaction and disabilities (4); Social skills (3)	64
Disability specific research	Autism/Asperger's (28); Severe and/or multiple disability (14); Early childhood special education (6); Intellectual	55

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	disability (4); Communication impairment- speech language disorders (3)	
Collaborative planning	Transitions (19); paraprofessionals (9); families (4); collaboration (4); home school partnerships (3); support for schools/staff (2); special education services (2); individualised education programs (1); self-determination and students with disabilities (1)	45
Legislation and policies	Disability standards and policies (18); funding model/issues (6); professional standards for principals, teachers and special educators (6)	30
Total articles		457

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### ***Inclusive teaching practice.***

Inclusive teaching practice emerged as the highest rating theme, with 155 articles in this category. The main focus of this theme was specific instructional strategies which were directly related to assisting students with disabilities in the regular classroom.

Literacy focused on interventions with 37 of these articles describing interventions that could be provided as whole class or small group instruction in inclusive classrooms and 15 studies describing individualised and/or segregated interventions. Of the 27 articles about assessment of literacy, 19 investigated assessment using normative tests, such as the Wheldall Assessment of Reading Lists (WARL) (Reynolds, Wheldall, & Madelaine, 2009), Test of Word Reading Efficiency (TOWRE) (Castles, Coltheart, Larsen, Jones, Saunders & McArthur, 2009) and Test of Everyday Comprehension (TERC) (McArthur, Jones, Anandakumar, Larsen, Castles, & Coltheart, 2013). Only eight articles reported on assessments used to inform teaching, such as the diagnostic assessment of error patterns in reading (Wheldall & Madelaine, 2006) and spelling (Bissaker & Westwood, 2006). Five

articles addressed patterns in reading outcomes based on gender, age and socio-economic differences.

Learning difficulty/disability included articles about identification of students with learning difficulties or disabilities (LD) and interventions to address these specific needs. Authors investigated school support structures (Thomas & Whitten, 2012), education system policies, and funding (Perry & McConney, 2013). Many articles focussed on teaching techniques to support secondary students (aged 12 to 18 years) with LD. The main strategies discussed related to student metacognitive awareness (Graham & Berman, 2012), self-efficacy (Lancaster, 2005) and attributions for learning success (Firth, 2006), motivation (Watson, 2007), acceptance of mistakes as part of the learning process, self-regulation and explicit instruction (Twomey, 2006). Six articles on assessment of learning discussed measuring student progress using the National Assessment Program – Literacy and Numeracy (NAPLAN) tests (Tognolini & Gordon, 2007) and evaluated the effectiveness of this national standards-based assessment as a diagnostic tool to prevent and resolve learning difficulties (Hempenstall, 2013). Other assessment articles advocated for reasonable adjustments and alternative tests to enable the participation of students with disabilities (Elliott, Davies & Kettler, 2012).

Research based pedagogy included research about effective teaching programs, instructional strategies and instructional design based on the teaching cycle (e.g. Hempenstall, 2014). The teaching practices included: direct instruction (McMullen & Madelaine, 2014); response cards during whole group instruction (Munro & Stephenson, 2009); sensory integration (Leonga & Cartera, 2008); mnemonic strategies; psycholinguistic, perceptual-motor, modality and social skills training; applied behaviour analysis; and formative evaluation (Carter, Stephenson & Strnadová, 2011). Many articles raised concern that teachers base their selection of programs and strategies for students with disabilities, on

commercial publishers and fads (Stephenson, 2008) rather than scientifically based research. In particular, some readily accepted 'brain-based learning' programs were critically evaluated, with researchers suggesting the need for professional learning in the field of 'neurofacts' and 'neuromyths' (Bellert & Graham, 2013).

Numeracy articles included discussion about developmental stages in mathematical knowledge and skills, and the implications for instructional design (e.g. Ellemor-Collins & Wright, 2011). Two articles considered assessment of mathematical skills and knowledge about test design (Howell & Kemp, 2006; Lowrie & Diezmann, 2009) and one article addressed causes, diagnosis, and interventions for students with dyscalculia (Williams, 2013). Inclusive numeracy interventions were investigated (e.g. Graham, Bellert & Pegg, 2007) one of which was designed to meet the specific needs of underachieving indigenous Australian students (Warren & deVries, 2009).

Assistive technology articles investigated the use of information and communication technologies to increase the engagement of students with disabilities in rural and remote schools (Forlin & Lock, 2006). There was a focus on the efficacy of iPads (MacDonald, 2014) and the use of tablet 'apps' to maintain connections between students who require medical treatment in hospital with their classroom peers (Hopkins, Wadley, Vetere, Fong & Green, 2014).

### ***Inclusive education.***

Inclusive education was the second most frequent theme and referred to broader aspects beyond classroom teaching practice, such as the skills, knowledge and attitudes needed for the successful inclusion of students with disabilities in school environments.

Teacher training pre and in-service covered topics such as the attitudes and perceptions of pre-service and early career teachers about the inclusion of students with

special needs into mainstream classrooms, as well as teacher preparedness to meet student needs. School based professional learning programs in relation to teaching students with disabilities were explored, including mentoring of regular and special education teachers (e.g. Beamish, Bryer & Davies, 2006; Dempsey & Christenson-Foggett, 2011) and the use of online learning courses (Rayner & Allen, 2013). Some authors noted the continuing gap between research evidence and teaching practice (Grima-Farrell, Long, Bentley-Williams & Laws, 2014).

Inclusion and inclusive classrooms focused on defining and describing inclusive education as implemented across Australian states and territories. The research investigated teacher and student perceptions about the inclusion of students with disabilities in regular classrooms (e.g. Brackenreed, 2008), and identified the skills, knowledge and attributes of teachers who were considered to be inclusive educators (e.g. Grima-Farrell, Bain & McDonagh, 2011). Effective school organisation, curriculum design and support for teachers were also discussed in the context of managing change to support whole school inclusive practice (e.g. Pearce & Forlin, 2005).

Disadvantaged communities highlighted inequities in student access to special education services and low achievement outcomes based on demographic and socio-economic differences. The over-representation of indigenous students in some categories of special education schools was identified by Graham (2012), while Brasche and Harrington (2012) noted additional challenges for remote communities. These included geographical and cultural isolation, lack of continuity of teaching staff and teacher quality, and the impact of itinerant student attendance. The unique needs of students who have experienced homelessness were also investigated by Moore and McArthur (2011). Implications of the effects of disadvantage for policy and practice were discussed (e.g. de Plevitz, 2007).

Assessment of students for diagnostic purposes to determine eligibility for access to special education services was challenged by Galletly, Knight and Dekkers (2010). These authors argued that systemic changes are needed to shift the emphasis from diagnosis and classifications of deficit and disability to functional assessments that aim to identify and target specific learning outcomes. The principles and benefits of the functional assessment focus underlying the Response to Intervention (RtI) approach were explained by Hempenstall (2012) and the application of RtI to literacy interventions was investigated (e.g. Buckingham, Wheldall and Beaman (2012).

***Behavioural and emotional difficulties and social skills.***

The dominant issues under *behavioural and emotional disorders*, included functional assessment (O'Neill & Stephenson, 2009) and delivery of behavioural interventions for students with persistent disruptive behaviour (Reynolds & Stephenson, 2008), emotional disorders (Ho, Carter, Stephenson, 2010) or Attention Deficit Hyperactive Disorder (e.g. Geng, 2011).

Health and wellbeing encompassed articles on approaches to support students with chronic illness, emotional or depressive disorders (e.g. Wilkie, 2012). These approaches included collaborative delivery of services and fostering students' feelings of school connectedness (Breen, Wildy & Sagers, 2011).

Social skills focussed on strategies to increase the social interactions of students in inclusive settings such as the explicit instruction of social skills (e.g. Davies, Cooper, Kettler & Elliott, 2015) and the development of an instrument to measure the quality of friendships between children with disabilities and their peers (e.g. Webster & Carter, 2010).

***Disability specific research.***

Autism Spectrum Disorder (ASD) was the single most prominent named disability. The articles focused on school and classroom practice as well as individualised interventions to meet the needs of students with ASD. Three articles investigated the accuracy and relevance of sources of information on ASD, including websites (e.g. Carlon, Stephenson & Carter, 2015).

Most of the articles under the category of severe and/or multiple disability provided research on interventions which were disability specific, for example, improving communicative interactions between students with severe or profound intellectual disability and their teachers (Barber, 2008). Lyons and Cassebohm (2011) challenged the notion of developing an Australian Curriculum that is relevant to students with severe and profound intellectual and multiple disabilities when quality of life outcomes are the priority. Studies relevant to students with mild to moderate intellectual disability addressed learning how to read, and the development of play skills and life skills (Sun & Kemp, 2006).

Early childhood comprised articles which specifically dealt with special education in the age range of 0-6 years in a pre-school, long day-care or early childhood setting. Three of the papers involved observing, recording and teaching social skills to young children with disabilities in an inclusive setting (e.g. Hamilton, 2005). Two articles investigated communication and literacy assessment and intervention (Galbraith, 2008; Harris, Botting, Myers & Dodd, 2011) while Grace, Llewellyn, Wedgwood, Fenech and McConnell (2008) contrasted government policy and provisions with best practice for the inclusion of students with disabilities, and concluded that a change of government policy was needed.

The three articles on communication impairment investigated intervention programs for students with speech language disorders (e.g. Heywood & Tait, 2006). The low incidence of articles with regard to communication/information communication technology and early childhood topics was likely due to the search terms employed and the Australian based

journal articles selected for the search procedure. Research in the fields of early childhood and information communication technology are typically reported in early childhood and information communication technology specific journals.

*Collaborative planning.*

Transition phases for students with disabilities or disadvantaged 'at risk' backgrounds such as Indigenous students (Helme, 2005) and socio-economic populations (Munro, 2011) ranged from early childhood to primary, high school and post school settings. While some authors surveyed student, parent and teacher perceptions about transition planning (e.g. Strnadová & Evans, 2013), most investigated the practice of schools in planning and assessing the transition outcomes for students with disability (e.g. Beamish, Meadows & Davies, 2012). The role of Vocational Education and Training (VET) courses (Helme, 2005) and functional assessment of capacity to work (Eagar, Green, Gordon, Owen, Masso & Williams, 2006) were also discussed in papers exploring post school options for transition to work or further study (Meadows, 2009).

Research about families investigated roles within families (e.g. Bennett & Hay, 2007), factors influencing the use and delivery of respite care (Chan, 2008), the emotional stress on families and the coping strategies families employ in caring for children with disabilities (Strnadová & Evans, 2007). Articles on home school partnerships reported processes, roles and relationships between parent/caregivers and school personnel to achieve optimum outcomes for students (Ludicke & Kortman, 2012). Two articles on collaboration compared models of collaboration within schools and between services (Crosby, Bauer, Hughes & Sharp, 2008; Moore, Evans & Dowson, 2005) while two reported on experimental online collaboration between teachers to solve some of the challenges of inclusive practice and geographical isolation (Fields, 2014; Kilham, 2009).

Support within schools was discussed in articles about paraprofessionals, support for schools/staff and special education services. The term paraprofessional has multiple meanings. For the purpose of this content analysis, the term paraprofessionals is used to encompass teacher's aides, learning support officers, education assistants, integration aides and teaching assistants. All nine articles focussed on the roles and responsibilities of paraprofessionals in supporting the learning of students with disabilities in inclusive classrooms. The articles highlighted the need for training, strong communication with teachers and the potential for the 'counter-productive' use of paraprofessionals in the classroom (O'Rourke & West, 2015). School support issues included the influence of school culture on school practices (Choi & Nieminen, 2008) and access to specialist support services beyond the school gate (McDonagh, Fordham & Dillon-Wallace, 2014). Individualised Education Programs were investigated by only one author (Dempsey, 2012) and one article on self-determination discussed issues related to valuing the opinions and choices of students with intellectual disability in the planning phase of program development (Galletly & Knight, 2011).

### ***Legislation and Policies.***

The theme of Legislation and Policies reflected issues specific to Australia, such as the *Disability Standards for Education* (Commonwealth of Australia, 2005), policies, funding models and support for schools, and professional standards for principals, teachers and special educators.

*Disability Standards for Education (DSE) and policies* comprised articles related to legislation, policies and curriculum with regard to special education in Australia. Concern that special education policy appeared to be based on tradition rather than research was raised (e.g. Foreman & Arthur-Kelly, 2008). The disparity between the intention of achieving equity

and improved outcomes for students with disabilities, and the actual impact of changes to the curriculum, policies, national testing, funding models and eligibility criteria was examined (e.g. Brennan, 2011). In particular, equity in assessment tasks for students with disabilities was contrasted with policy, practice and discrimination law (e.g. Cumming, Dickson & Webster, 2013). Curriculum reform was also of interest to researchers, given the development and implementation of the first Australian curriculum from 2008 (e.g. Collins & Yates, 2009). Some researchers questioned the relevance of the Australian curriculum for students with severe intellectual disability and the lack of specialised documentation about disability (e.g. Aspland, Datta & Talukdar, 2012).

Funding models and support for schools identified the impact, implications, or outcomes of funding models for special education services (e.g. Sigafos, Moore, Brown, Green, O'Reilly & Lancioni, 2010). The reported increase in the number of students with disabilities was found to be strongly linked to funding eligibility rather than objective assessment of learning need (Graham, 2015). The debate about funding for special education services and resources remained topical (e.g. Dowling, 2008), and was reflected in the review of school funding commissioned by the federal government and which resulted in the Gonski report of 2011 (Anderson & Boyle, 2015). Authors linked Australian funding models with the proportionate growth of enrolment of students from low socio-economic status (SES) backgrounds in public schools (Watson & Ryan, 2010), and the association between low SES and lower academic achievement (Perry & McConney, 2010).

Professional standards for principal/teacher and special educators raised issues about the age and qualifications of Australian special education teachers and employment recruitment (e.g. Thomas, 2009). Authors considered the unique role of special educators (Dally & Dempsey, 2015) and questioned whether additional and specific professional

standards were needed to describe the skills and knowledge required by special education teachers in Australia (Dempsey & Dally, 2014).

**Research methodology.**

Overall, 63% of the articles reported empirically based research studies (see Figure 2). Among these, there was more quantitative (102) than qualitative (84) or mixed-method (81) research. Mixed method research studies also included case study methodology. The least used methodology was single subject research design with only 21 entries. Literature reviews comprised the other 37% of articles in the data base. This category included conceptual research, discussion papers, and proposed models, frameworks or theories. The main themes in the literature reviews included literacy, the disability standards for education, behaviour disorders, inclusion and research-based pedagogy.

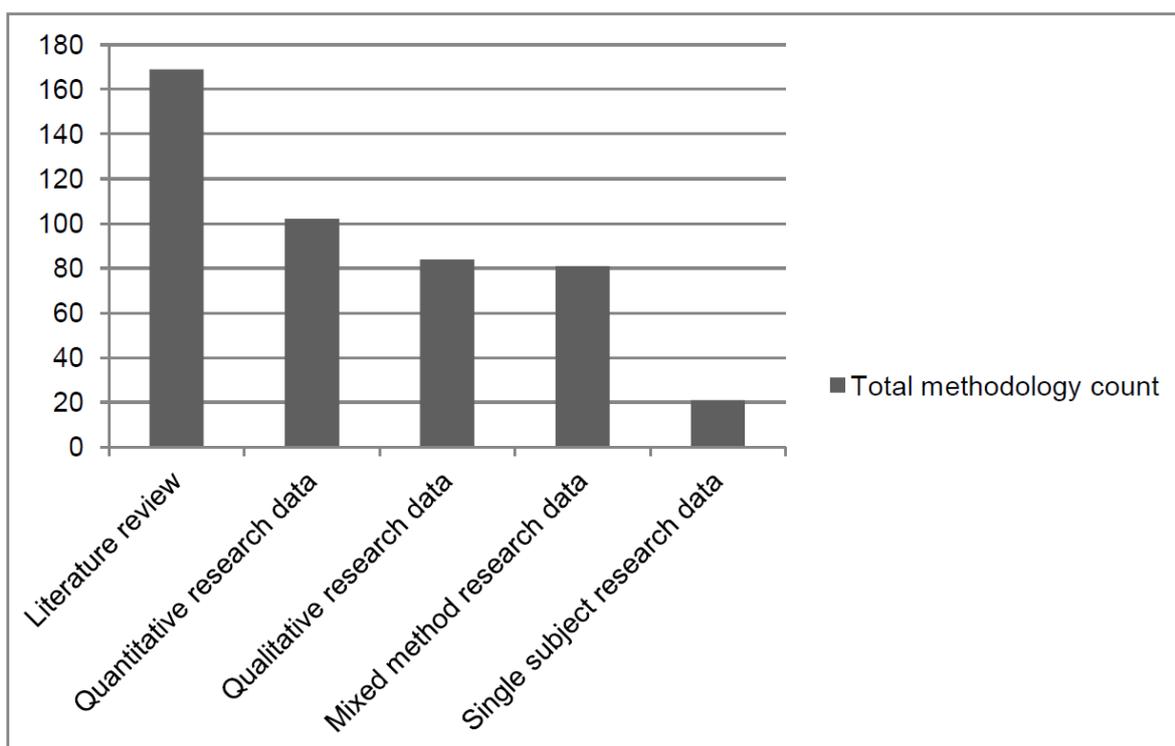


Figure 2. Frequency of research methods employed

Almost a quarter of the articles included in the content analysis (24%) came from the *Australasian Journal of Special Education*. Of the seven journals which were selected for the chronological search, this journal was most likely to publish articles involving Australian-based participants and which were relevant to Australian special education policy or practice including legislation, policy and educational environments (University, TAFE, colleges and schools, private and public).

## Discussion

In contrast to Forlin and Forlin's (2000) research review where the main focus was on the diagnosis and identification of students with special needs through clinical evaluation and standardised tests, this content analysis of research articles from the decade following the introduction of the *Disability Standards* has revealed a research trend focussed on intervention strategies in inclusive settings. This finding is particularly interesting given the restricted use of only two search terms: 'special education' and 'Australia'. Inclusion and inclusive classrooms appeared to dominate the special education research agenda with current foci on literacy and numeracy interventions, teacher training and practice, and approaches to supporting students with behavioural and emotional disorders, autism, and learning difficulties in the context of inclusive classrooms. Research on severe and/or multiple disabilities remained in the context of special education settings. Collaborative planning, legislation and policies such as professional standards for teachers, national curriculum and assessment, accountability issues and school funding models, also emerged as significant areas of interest.

The content analysis also confirmed the increasing diversity of research methodology that was noted by Forlin and Forlin (2000). Prior to 1990, special education research methods were predominantly quantitative, as researchers sought to measure observable changes in

student achievement that could be attributed to specific intervention programs. The current analysis revealed that quantitative studies investigating intensive individualised interventions has been overtaken by qualitative and mixed-methods designs that seek to investigate student learning and teacher practice within the inclusive and ‘natural’ context of the classroom or school.

The distinctive focus on inclusion from 2005 to 2015 may have also played a part in diversifying research methodology. As inclusive mainstream classrooms are more likely to have complex environmental variables, research focussing on interventions delivered in clinical or segregated educational settings has become less relevant. Inclusive practice has necessitated a rise in ethnographic research which utilises qualitative and mixed method research methodologies to reveal outcomes which may be applied across “complex sociocultural school systems” (Forlin & Forlin, 2000, p. 254).

The current research themes appear to be focussed on the provision of support in mainstream schools to promote the learning of all students including those with a diagnosed disability and those ‘at-risk’ of school failure. Within the school context, planning and assessment is no longer focussed on identification and diagnosis of disability to determine eligibility for special education services (Forlin & Forlin, 2000). Instead, the focus is on assessment to inform whole class instruction and small group interventions and best practice for paraprofessionals in the inclusive classroom.

In the current content analysis, there were no articles that specifically addressed the impact of the National Disability Insurance Scheme (NDIS) which started as a trial in targeted regions in the states of Tasmania, South Australian, Victoria and New South Wales in July 2013 (Australian Department of Human Services, n.d.). The recency of the nationwide roll-out of this scheme in 2016 may explain the lag in research articles examining the impact of the NDIS on education services and providers.

Like Forlin and Forlin (2000), this analysis of research over the past decade provides evidence for the tendency of educational research in Australia to reflect government changes in philosophy and policy. The *Disability Standards for Education* (Commonwealth of Australia, 2005) were legislated in 2005, the baseline year for the articles sourced for this analysis, and mandated the provision of accessible and equitable educational services for students with a disability. Since the Standards were introduced, research in special education has become more focussed on practices aimed at including and supporting children with disability in mainstream settings. Rather than leading and influencing future educational change, research in the field of Australian special education appears to be following policy initiatives. The growth in research about behavioural and emotional disorders and interventions and programs to promote students' social skills, for example, seems linked with the increased enrolment of children with complex needs in inclusive schools and classrooms.

A new area of research appeared during 2005 to 2015 which was not apparent in the findings of Forlin and Forlin (2000). Collaborative planning between teachers, families and professionals, such as psychologists and occupational therapists, has emerged in relation to key transition periods and adjustments to learning plans. This may be owing to the requirement within the *Disability Standards for Education* (2005) to consult with families in relation to adjustments provided by educational services. It may also be attributed to the demands of the inclusive classroom where teachers have benefited from access to specific information about individual students so that activities can be designed to maximise learning for all students. The introduction of the Australian Professional Standards for Teachers (AITSL, 2015) may have also played a part in the rise of collaborative planning, with Standard 7 requiring evidence of collaboration with parents/carers with regard to the learning and wellbeing of students (Dally & Dempsey, 2015).

### **Implications for the International Context**

This review of Australian ‘special education’ research has revealed an intense focus on inclusive teaching practice and inclusive education despite the fact that Australia has not developed inclusion specific legislation or policy. According to UNESCOs (2009) *Policy guidelines on Inclusion in Education*, Booth and Ainscow's Index for Inclusion (Revised 2011), and Loreman, Forlin and Sharma's (2014) systematic review of Inclusive Education, legislation and policy need to do more than prevent discrimination and reduce exclusion from schools and communities. Policies need to provide systems and strategic plans for inclusive education, administrative coordination structures, research-based knowledge, and access to resources and support services. UNESCO (2009) recommends that a wholistic education system needs to position special and inclusive education in the policy cycle (UNESCO, 2009) and this may include restructuring of school culture, policy and practice to meet the needs of all students, including those with disability.

When developing indicators for inclusive education for the Pacific Islands, Forlin, Sharma, Loreman and Sprunt (2015) found that it was necessary to use the term disability-inclusive education to distinguish between other minority groups that are also recognised as potentially excluded from education based on their gender, geographical location, economic background and religious beliefs. Likewise, the Pacific Indicators for Disability-Inclusive Education (Sharma, Forlin, Marella, Sprunt, Deppeler, & Jitoko, 2016) were formulated in response to the United Nations *Convention on the Rights of People with Disabilities* (UNCRPD, 2006). Governments play a key role in building the capacity of systems and the capability of staff at national, regional and local levels (Loreman et al., 2014; Forlin, Chambers, Loreman, Deppeler, & Sharma, 2013). Over the decade of this review, there have been numerous policy changes in Australia that have necessitated changes in practice, however, without investigating and addressing systemic barriers (Tiwari, Das, & Sharma,

2015) inclusion may remain an ideology that teachers are encouraged to aim for but not supported to attain.

The findings from the current review add to the body of international research that provides evidence that legislation and policy influence practice (Clough, 1998; Foreman & Arthur-Kelly, 2008; Foreman, 2015; Forlin et al., 2013; Graham & Jahnukainen, 2011; Morrison, 2015; Wirienga & Taylor 2015). Since policy appears to provide some impetus in meeting the international commitment of *education for all*, it is imperative that legislation provide unambiguous expectations for action, and policies are developed that inform, guide and regulate implementation of inclusive education. The NCCD is an example of a national policy that has been formulated to influence school practice with regard to implementing the anti-discrimination focus of the *Disability Standards for Education* (2005). The NCCD has established a system to collect data about the participation of students with disability in schools across the nation. This data is now being used to provide some additional funding to schools (Australian Government Department of Education and Training, 2018). The method of data collection in the NCCD is of international significance, as the UNESCO *Policy guidelines on inclusion in education* (2009) emphasise data collection that informs policy and practice.

The lack of legislation or policy surrounding inclusive education means that teachers are dealing with a required change that has no established mechanisms based on research about effective inclusive practices to support students with a disability in the complex social setting of regular schools. As such, teachers and school leaders are required to prevent discrimination without knowing how to best support the students in the inclusive education environment. This puts teachers in a tenuous position. Teachers may be held to account for discrimination against a student with disability in a court of law, or fail to meet accreditation requirements for not meeting the specific learning needs of a student with disability in an

inclusive learning environment (AITSL, 2015, Standard 1.5, 4.1). However the policies may not have provided the necessary infrastructure to guide and support inclusive practice. This might include funding for new administrative tasks, additional staff, resources and training. There appears to be a disjoint between legislative requirements, policy expectations and research-identified systems to enact legislation and policy in an efficient manner. This may be one of the reasons teachers have been reported to rely on myths rather than facts to support students' learning needs (Bellert & Graham, 2013; Stephenson, 2008), as the policies do not provide adequate information and guidance to practitioners about inclusive practice.

### **Limitations**

The content analysis was limited by the small number of journals searched. Specialist journals such as early childhood, sensory, and information and communications technology were not sourced. Also, the use of only two specific search terms 'special education' and 'Australia' may have led to an underestimation of the amount and nature of Australian research from 2005 to 2015 that focused on inclusive education.

### **Current Gaps and Future Research**

The content analysis of special education research from 2005-2015 identified a growing tendency to investigate teaching strategies which were designed to be implemented in an inclusive environment. It is interesting to note that this research focussed on classroom practice and rarely investigated whole school practice. Some attempt was made in relation to collaborative planning between the teacher and service providers, but the emphasis in recent research has remained on instructional strategies at the classroom level. The processes at whole school level to establish and maintain effective organisational structures that enable collaboration to occur were rarely reported. The content analysis revealed interest in effective

teaching strategies in areas such as literacy, learning difficulties and numeracy, however little was reported about the degree to which this research was implemented into classroom and whole school practice. Similarly, the role of school leadership in establishing whole school cultures where inclusive practice is effectively supported has only recently been explored (Garner & Forbes, 2013).

The content analysis revealed some gaps which may be worth pursuing. For example, only one article about Individual Education Plans (IEP) was located (Dempsey, 2012). According to legislation and policy initiatives such as the DSE and NCCD “individualised or personalised learning plans” should be developed in consultation with parents or carers for all students with disability (Commonwealth of Australia, 2016; Urbis, 2015). It would seem pertinent then to investigate the processes used in schools to develop, record and measure student outcomes with regard to their IEPs in the Australian context. Research about the availability and effectiveness of teacher education in developing and implementing IEPs may also be beneficial. A recent parliamentary inquiry into *Education of students with disability or special needs in New South Wales* revealed that in some schools within the NSW Department of Education students with disability did not have an IEP (or an equivalent document). In recognition of the important role that IEPs play in guiding learning activities and teaching strategies, the New South Wales government has indicated it will make IEPs a mandatory requirement for all students with disabilities in NSW Department of Education schools (Stokes, 2018). This example highlights the trend for policy to be written or modified as a reactive response to problems with current practice.

The purpose of government and system policies is to lead, guide, support and regulate the implementation of legislature (Bourdieu, 1992; Forlin & Bamford, 2005; Lupart & Webber, 2012; Morningstar et al., 2016). Research provides an opportunity to reveal what is currently happening with regard to the implementation of legislation in schools and to

investigate effective organisational structures and processes. With this contextual knowledge, policies can be written in a proactive manner, addressing current practice and identified needs. In addition, this research may influence the development of inclusive education legislation and policy at national, state and territory levels as a means to achieving Australia's international commitment to inclusive education for all students (UN, 2006; UNESCO, 1990, 2009).

It would appear that more research related to current classroom and whole school practice with regard to the inclusion of students with disabilities is also warranted. Little is currently known about the extent to which legislation such as the *Disability Standards for Education 2005*, *National Disability Insurance Scheme Act* (Commonwealth of Australia, 2013) or related policies such as NCCD have impacted on everyday classroom and whole school practice. Further investigation about how the gap between research evidence, teaching practice and policy development can be addressed may provide insight into effective support systems that could be embedded into policy and legislation. An analysis of the statistics collected through the NCCD would also provide insight into the extent to which the *Disability Standards for Education 2005* have been embedded into everyday practice and help to evaluate the success of the NCCD in achieving its goals of enabling schools to support students with disability. A greater understanding of what is currently happening in schools to meet the needs of students with disabilities can guide the development of policies and professional learning so that schools build their capacity to fulfil their legal and ethical obligations to provide equity in education.

## **Conclusion**

Australian research in special education over the decade 2005-2015 appears to have followed, rather than led changes in education policy. Future research has the potential to

reverse this trend if policy makers are informed about current practice and what is needed to achieve equity and educational inclusion for all students. This will enable insightful collaboration between policy makers, researchers and school staff so that policies effectively support and regulate the implementation of legislation into practice.

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